

REMARKS

Claims 1-20 are pending in the present application. Claims 1-4, 6-15 and 17-20 stand rejected. Claims 5 and 16 are objected to. New Claims 21-26 have been added. No new matter is submitted with this amendment.

Reply to the Objection to the Specification

The Examiner has objected to the Abstract of the disclosure for containing form and legal phraseology often used in patent claims. Specifically, the Abstract contains the language "means for inflating the airbag". Applicants have amended the Abstract to remove the form and legal phraseology used in patent claims. It is believed that this amendment overcomes the Examiner's objection to the Specification. Withdrawal, therefore, is respectfully requested

Reply to the Rejection of Claims 3, 4, 13 and 14 under 35 U.S.C. § 112, Second Paragraph

The Examiner has rejected Claims 3, 4, 13 and 14 under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner states that –

The claims state that the arrangement is "formed with a weight distribution and dimensioning of the steering wheel, airbag, and the means for inflating the airbag which corresponds to" either "a moment of inertia" or "a torsion natural frequency and a bending natural frequency" for the steering wheel. This language is confusing. It is unclear as to what is meant by the language stating that the arrangement is "formed with a weight distribution and dimensioning". Further explanation is required.

That portion of the Specification describing that claimed in Claims 3, 4, 13 and 14 is found in paragraphs 31-41. As described therein, the goal of the arrangement is to minimize the steering wheel weight while increasing the moment of inertia. This is accomplished by placing a major portion of the airbag weight (*see*, Claims 2 and 12) and gas generator around the periphery, or walls, of the bowl-shaped element of the steering wheel (*see*, Specification: ¶¶ 31-32, lines 1-4). The inertia of the steering wheel is controlled by the mass of the rim (*see*, Specification: ¶¶ 40-41). The inertia of the steering wheel assembly affects the natural frequency or vibration of the system. The different parts of the arrangement of the present invention have been arranged so as to obtain an inertia within a predetermined range.

Claims 3, 4, 13 and 14 have been amended to more clearly define the terms “formed with a weight distribution and dimensioning”. It is believed that these amendments overcome the rejection of Claims 3, 4, 13 and 14 under 35 U.S.C. 112, second paragraph. Withdrawal, therefore, is respectfully requested.

Reply to the Rejection of Claims 1, 2, 6-12, 15 and 17-20 under 35 U.S.C. § 102(e)

The Examiner has rejected Claims 1, 2, 6-12, 15 and 17-20 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,921,146 to Cattaneo (“Cattaneo”). Specifically, the Examiner states that –

Cattaneo discloses an air bag steering wheel with visible spokes, including a hub for fixing to a steering column (7 in Fig. 5), a substantially conically-shaped bowl-shaped element with an upper and lower shell (5, 6 in Fig. 5) connected to the hub (6 in Fig. 5) with at least two spokes (8 in Fig. 1) connected by a reinforcing element that is part of the bowl-shaped element (5 in Fig. 1) which connects the bowl-shaped element to a steering wheel rim (2 in Fig. 5), where the spoke is integrally formed with the bowl shaped element and hub as a single material item. The bowl-shaped element constitutes a casing which encloses an airbag and a means for inflating the airbag (Col. 1, lines 33-35).

Regarding the “integrally formed” language, it has been held that the term “integral” is sufficiently broad to embrace constructions united by such means as fastening and welding. *In re Hotte*, 177 USPQ 326, 328 (CCPA 1973). In this case, the bowl shaped element, spoke, hub, and steering wheel rim are connected with fasteners (see Fig. 1).

Regarding Claims 8 and 19 (“arrangement is formed as an integrated unit by casting”), the method of forming the device is not germane to the issue of Patentability of the device itself. Therefore, this limitation has not been given patentable weight.

For the following reasons, Applicant respectfully traverses the Examiner’s rejection of Claims 1, 2, 6-12, 15 and 17-20 under 35 U.S.C. 102(e) as being anticipated by Cattaneo.

Referring to Cattaneo, therein is disclosed an airbag steering wheel with visible spokes. The steering wheel includes a round rim 1 having an inner metal core 2 and external body 3 (col. 1, line 66 – col. 2, line 1). The steering wheel also includes a central unit 4 made of two overlapping metal parts 5 and 6 fixed to one another, with the lower part 6 shaped as a bowl and the upper part 5 essentially flat (col. 2, lines 4-8 and 29-30). The lower part 6 includes three T-shaped external ends 20 radial spokes 8 that extend radially upwardly to the metal core 2 of the rim 1 (col. 2, lines 6-10). The upper part 5 has a concave central portion 10 designed to accommodate an air bag device 11, housed inside the concavity of the lower part 6 and fastened to it by means of bolts 28 (col. 2, lines 30-34). Still, no means for inflating the airbag is taught or suggested by Cattaneo.

In order for a reference to be anticipatory, it must include each and every element as claimed. Unless all of the same elements are found in exactly the same situation and united in the same way to perform the same identical function, in a single prior art reference, there can be no anticipation as a matter of law. Nowhere does Cattaneo teach or suggest a wall section of the bowl-shaped element at least partly forming a part of the means for inflating the airbag, as is claimed in independent Claims 1, 9 and 20-26. Instead, Cattaneo only teaches "a lower part shaped as a bowl [is] designed to accommodate the air bag device" (col. 1, lines 33-34). As Cattaneo does not teach or suggest each and every element claimed in independent Claims 1, 9 and 20-26, Cattaneo cannot be said to anticipate Claims 1, 2, 6-12, 15 and 17-20 of the present invention.

For these reasons, Claims 1, 2, 6-12, 15 and 17-20 are not anticipated by Cattaneo. Withdrawal of the rejection of Claims 1, 2, 6-12, 15 and 17-20 under 35 U.S.C. § 102(e) is therefore respectfully requested.

Reply to the Rejection of Claims 1, 2, 6, 7, 9-12, 15, 17-18 and 20 under 35 U.S.C. 103(a)

The Examiner has rejected Claims 1, 2, 6, 7, 9-12, 15, 17, 18 and 20 under 35 U.S.C. § 103(a) as being unpatentable over International Publication No. 98/34826 to Fosse ("Fosse") in view of U.S. Patent No. 5,655,789 to Kreuzer ("Kreuzer"). Specifically, the Examiner states that –

Fosse discloses a vehicle including a hub for fixing to a steering column (2 in Fig. 1), a substantially conically-shaped bowl-shaped element with an upper and lower shell (5, 6, 7 in Fig. 1) connected to the hub (4 in Fig. 1) with at least two spokes (8a, b in Fig. 1) connected by a reinforcing element that is part of the bowl-shaped element (11a, b in Fig. 1) which connects the bowl-shaped element to a steering wheel rim (9 in Fig. 5), where the spoke is integrally formed with the bowl shaped element and hub as a single material item. However, Fosse does not disclose an airbag mounted in the bowl-shaped steering wheel. Kreuzer discloses a gas bag collision safety system with an airbag (12 in Fig. 1) folded into the bowl-shaped steering wheel, in order to protect a passenger in the event of a collision. Therefore it would have been obvious to modify Fosse by adding an airbag to the bowl-shaped steering wheel in order to protect a passenger in the event of a collision, as taught by Kreuzer.

For the following reasons, Applicant respectfully traverses the Examiner's rejection of Claims 1, 2, 6, 7, 9-12, 15, 17, 18 and 20 as being unpatentable over Fosse in view of Kreuzer.

Referring to Fosse, therein is taught a vehicle steering wheel 1 that provides a structure for energy absorption in the event of a possible collision (p. 5, lines 6-8). The steering wheel 1 is constructed of an essentially cup-shaped and shell-like element, with the

bottom part of the shell being a hub 4 (p. 5, lines). As noted by the Examiner, Fosse does not disclose an airbag mounted in the bowl-shaped steering wheel (*see*, p. 5, lines 14-17).

Referring to Kreuzer, therein is taught a gas bag collision safety system for the steering wheel 1 of a vehicle (see Abstract). The steering wheel 1 includes a steering wheel hub 2, integrally cast with the steering wheel spokes 3 (col. 2, lines 9-11). The steering wheel hub 2 is fastened to the steering wheel spindle or column 8 (col. 2, lines 16-18). On the steering wheel hub 2 there is mounted a pot-shaped gas bag or air bag container 11 having an opening 10 in its bottom and aligned with a bore in the hub 2 (col. 2, lines 18-21). A gas or air bag 12 is folded in the container 11 so that its gas inlet 13 is aligned with the opening 10 in the container 11 (col. 2, lines 21-23). A tubular gas generator 18 having radial gas outlet openings 19 is fastened in the steering column 8 “such that, between periphery of the steering spindle 8 and the periphery of the gas generator 18 a gap 20 of cylindrical shape is present” (col. 2, lines 30-33). Accordingly, Kreuzer does not teach or suggest a wall section of the bowl-shaped element at least partly forming a part of the means for inflating the airbag, as is claimed in independent Claims 1, 9 and 20-26 and therefore adds nothing to Fosse. Accordingly, even if there was a motivation to combine Fosse with Kreuzer, one still would not have the presently claimed invention.

Further, the Examiner has provided no motivation to combine Fosse with Kreuzer. It is well recognized that in order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference, or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference(s) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success, must both be found in the prior art, not in Applicants’ disclosure (*In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991)). If there were a motivation to combine Fosse with Kreuzer, as shown above, one would still not have all of the claim limitations.

“There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art” (*In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-8 (Fed. Cir. 1998) holding that, although the combination of the references taught every element of the claimed invention, without a motivation to combine, a rejection based on a *prima facie* case of obvious was improper.) The level of skill in the art cannot be relied upon

to provide the suggestion to combine references (*Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999)).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art" (*In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000)). Fosse clearly states that the "steering wheel conventionally is intended to be covered with stuffing material and upholstery" (p. 5, lines 15-17). Nothing is found in Fosse that would provide one skilled in the art with the motivation to take the airbag of Kreuzer and incorporate it into the steering wheel of Fosse. (A person of ordinary skill in the art is "one who thinks along the line of conventional wisdom in the art and is not one who undertakes to innovate. . ." *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 227 U.S.P.Q. 293 (Fed. Cir. 1985). To combine Fosse and Kreuzer would take a great deal of innovation by one skill in the art since neither reference teaches or suggests such a combination.) Further, as shown above, even if one were to combine Fosse with Kreuzer, one would not have a wall section of the bowl-shaped element at least partly forming a part of the means for inflating the airbag.

For these reasons, Claims 1, 2, 6, 7, 9-12, 15, 17, 18 and 20 are patentable over Fosse in view of Kreuzer. Withdrawal of the rejection of Claims 1, 2, 6, 7, 9-12, 15, 17, 18 and 20 under 35 U.S.C. § 103(a) is therefore respectfully requested.

The Examiner has indicated that Claims 5 and 16 would be allowable if rewritten in independent form, including all the limitations of the base claim and any intervening claims. New Claims 21 and 22 are equivalent to Claims 5 and 16 rewritten in independent form, including all the limitations of the base claim and any intervening claims. Accordingly, new Claims 21 and 22 should be allowed.

Further, new Claims 23-26 are equivalent to Claims 3, 4, 13 and 14 rewritten in independent form, including all the limitations of the base claim and any intervening claims. The Examiner has stated that none of the prior art appears to read on Claims 3, 4, 13 and 14 as understood by the Examiner, and that the subject matter of the claims appears to be allowable if the rejections under 35 U.S.C. § 112 can be overcome. It is believed that the

above remarks and amendments overcome the 112 rejection. Therefore, allowance of Claims 3, 4, 13, 14 and 23-26 is respectfully requested.

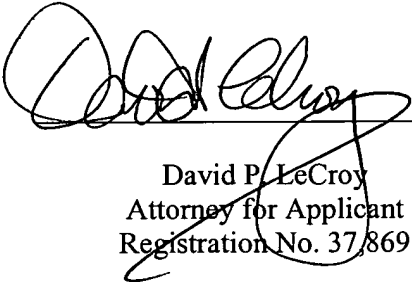
With respect to the priority document, Applicants have requested a copy of the same and will provide it upon receipt.

It is believed that the above amendments and remarks overcome the Examiner's objection and rejection of the claims under 35 U.S.C. §§ 112, 102(e) and 103(a) as indicated herein above. Withdrawal of the rejection of the claims is therefore respectfully requested. Allowance of the claims is believed to be in order and such allowance is respectfully requested.

Respectfully submitted,

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